

The disk as recited in claim 1, wherein said position offset signal has a position offset signal amplitude that is stored in said calibration storage field.

3. The disk as recited in claim 1, wherein said track includes a data field, said calibration field being located in said data field.

4. The disk as recited in claim 1, wherein said servo field of said one of said tracks and said servo field of said second one of said tracks each contains a set of servo bits including an A bit and a B bit that have a common boundary located at the track centerline.

5. A hard disk drive, comprising:

- a housing;
- an actuator arm mounted to said housing;
- a head that is mounted to said actuator arm, said head having a write element and a read element, the read element and the write element having a position offset;
- a spin motor mounted to said housing; and
- a disk attached to said spin motor, said disk having a plurality of tracks that each have a centerline, one of said tracks having a servo field and a calibration field with a calibration field centerline that is offset from the track centerline, said calibration field includes a single calibration burst providing a burst profile with a peak value, that is used to generate a position offset signal, said calibration burst being written by said head, a second one of said tracks having a servo field and a calibration storage field with a calibration storage field center line that is centered along the track centerline, wherein information representing the position offset is stored in the calibration storage field.

6. The hard disk drive as recited in claim 5, wherein said position offset signal has a position offset signal amplitude that is stored in said calibration storage field.

7. The hard disk drive as recited in claim 5, wherein said track includes a data field, said calibration field being located in said data field.

8. The hard disk drive as recited in claim 5, wherein said servo field of said one of said tracks and said servo field of said second one of said tracks each contains a set of servo bits including an A bit and a B bit that have a common boundary located at the track centerline.

9. A method for calibrating and storing information representing the offset between a read element and a write element of a head in a hard disk drive, comprising the steps of:

- a) providing a disk having a plurality of tracks each having a centerline, a first one of said tracks having a servo field and a single calibration burst providing a burst profile with a peak value, said calibration burst having a calibration burst centerline that is offset from the track centerline, a second one of said tracks having a servo field and a calibration storage field with a calibration storage field centerline that is centered along the track centerline;
- b) measuring a profile of the single calibration burst;
- c) generating a position offset signal corresponding to the sensed single calibration burst, said position offset signal having an offset amplitude; and
- d) storing said position offset signal amplitude in the calibration storage field.

10. The method of claim 9 further comprising the steps of:

- e) aligning said read element with the calibration storage field centerline; and
- f) reading the position offset signal amplitude located on the calibration storage field.

11. The method as recited in claim 9, wherein step b) comprises the steps of:

- b1) aligning a read element over a first position of the track that -50% from the track centerline;
- b2) sensing the magnitude of the calibration burst at the first position;
- b3) aligning the read element over a plurality of positions of the track that is between -50% from the track center line and +50% from the track centerline;
- b4) sensing the magnitude of the calibration burst at the plurality of positions; and

storing the magnitudes of the calibration burst corresponding to the first position and the plurality of positions as the provide of the calibration burst.

12. The method as recited in claim 9, further comprising the steps of:

- g) aligning the read element over the track centerline; and
- h) moving the read element in accordance to the position offset signal amplitude stored in the memory device.

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